

DRAWING AMENDMENTS

The examiner has objected to the drawings for failing to comply with 37 CFR 1.84(p)(5) because they do not include item number 113. Applicant proposes replacing the original sheet 14 (FIG. 15) of the drawings with the attached replacement sheet 14, which differs from the original sheet 14 by showing the registry 113. Applicant did not show the changes to sheet 14 in red ink because the attached copy of sheet 14 is being transmitted via fax.

REMARKS

In the remarks below, the abbreviation OA refers to the office action mailed May 25, 2005.

Claims 1-6, 9, 10, 12, 14-21, 24-25, 27, 29, and 30 stand rejected under 35 U.S.C. 102(e) as being anticipated by Hawkinson, U.S. Patent No. 6,295,532. Claims 7, 8, 22, and 23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkinson and in further view of Whitehead et al (U.S. Patent No. 6,085,030). Claims 11, 13, 26, and 28 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hawkinson and in further view of Alles et al (U.S. Patent No. 6,466,976).

Claims 16-29 have been canceled from the present specification and claims 31 - 42 have been added thereto.

The present invention, as defined by independent claim 1, relates to a method to pre-compile configuration information for a network connection device (designated 12 in FIG. 1). The method comprises receiving a rule file (designated 64 in the embodiment described with respect to FIG. 9) defining behavioral requirements for the network connection device (12) and an operations file (designated 62) describing operations supported by a plurality of components of the network connection device (12). The method generates a rule program (66), executable by the network connection device (12), utilizing the rule file (64) and the operations file (62). The rule program (66) comprises a set of operations, selected from operations supported by the plurality of components of the network connection device (12), for performance by the respective components of the network connection device (12) in accordance with the behavioral requirements defined by the rule file (64).

Hawkinson describes a system and method for classifying information received by a communications system. Hawkinson's FIG. 2 illustrates a queuing module 200 implemented on a communications device 100 (FIG. 1). Network traffic elements, including ATM cells, are received by a receive module. Certain types of ATM cells, relating to flow control, are passed to a resource manager block 222. The resource manager 222 responds to these cells by issuing requests for establishing, terminating, and modifying connections to a connection management task 226. The connection management task 226 then directs the resource manager 222 to install, de-install, or modify the

connections (Hawkinson, Col. 6, lines 41 - 46). The resource manager 222 also maps class and policy definitions, such as resource requirements, for the flows. A flow database 224 containing the current resource state and other parameters and state variables is coupled to the resource manager 222 (Hawkinson, Col. 7, lines 4-10).

The receive module includes a flow classification and routing block 218 (FIG. 4). The flow classification and routing block 218 examines incoming data units and determines if the data units belong to an existing flow. If so, the flow classification and routing block then establishes the class of network traffic the existing flow belongs to using a class definition table 332 (see Table 1), a policy definition table 334 (see Table 2) and a pipe definition table 336 (see Table 3). These tables instruct the flow classification and routing block 218 how to proceed in handling the data unit. If a new flow needs to be established, the flow classification and routing block will pass a resource request to a fly-by flow admission block 232. The fly-by flow admission block in turn determines the quality of service (QoS) the new flow will require and makes a request to the resource manager 222. The resource manager 222 then determines if there are enough resources available to meet the requested QoS. If the necessary resources are available, the resource manager 222 notifies the fly-by flow admission block 232, which in turn acquires the new flow.

There are several distinctions between the present invention, as defined by claim 1, and the system and method described by Hawkinson.

The examiner has asserted that the rule file (64) of claim 1 is equivalent to the "policy definition [table]" 334 of Hawkinson (OA, point 5, line 4). Applicant respectfully disagrees. Referring to page 25, line 3 through page 29, line 2 of the present specification, a rule file (64) includes text that describes how the network connection device (12) should respond to various events (e.g. if "A" is true, do "x"; if "B" is true, do "y", etc). An example of Hawkinson's policy definition table is shown in Table 2. Applicant submits that Table 2 shows the policy definition table 334 to be, as the name implies, a list of information pertaining to a particular policy, such as the name of the policy, the time the policy goes into effect, etc. The policy definition table 334 does not specify "behavioral requirements of a specific network device" (specification, page 19, lines 12-13).

Applicant submits that "behavior" is the manner in which something functions or operates and does not pertain to whether something is or is not operating. Comparing the rule file (64) of claim 1 to the policy definition table 334 of Hawkinson is, at best, analogous to comparing the source code of a computer program to a list of variables taken from the source code of a somewhat similar, but not identical, computer program. Applicant therefore submits that the policy definition table 334 is not equivalent to the rule file (64) of claim 1.

The examiner has asserted that the network connection device (12) is equivalent to FIG. 4 of Hawkinson (OA, point 5, lines 5, 7-8, 10). Applicant respectfully disagrees. Figure 4 is described as illustrating "details of functional blocks within the flow classification and routing block 218" (Hawkinson, Col. 3, lines 23-25). Hawkinson describes the function of the flow classification and routing block 218 as determining whether a flow has been set up for an incoming data unit and for determining the class of traffic to which the flow is assigned (Hawkinson, Col. 5, lines 28 - 30). Applicant submits that the neither the "flow classification and routing block" 218 nor any of its internal functional blocks are equivalent to a network connection device (12) as the term "network connection device" is used in the present specification, e.g. a network switch, router, etc (specification, page 2, lines 14 and 15).

The examiner has asserted that the operations file (62) of claim 1 is equivalent to the "class definition [table]" 332 of Hawkinson (OA, point 5, line 7). Applicant respectfully disagrees. Referring to page 22, line 4 through page 25, line 2 of the present specification, the virtual machine (10), which is hosted on the network connection device (12) (specification, page 8, lines 10 - 12), may be broken down into a set of individual components, each component being a component of the network connection device and being capable of performing operations related to the function of the virtual machine (10). The operations file (62) includes a description of the operations that can be performed by these components (specification, page 22, lines 8-10). Hawkinson's class definition table 332 consists of a list of possible criteria for assigning IP protocol data units to a particular class, i.e. a range of source ports, a range of destination ports, a range of destination IPs, etc. (Hawkinson, TABLE 1 and Col. 14, lines 50-54).

Hawkinson's Table 1 shows an example of a class definition table 332. Applicant submits that the "Object[s]" and "Description[s]" shown in Table 1 clearly do not correspond to a list of a network connection device's components' operations and is therefore not equivalent to the operations file (62) of claim 1.

The examiner has asserted that the rule program (66) of claim 1 is equivalent to the resource manager 222 of Hawkinson (OA, point 5, line 9). Applicant respectfully disagrees. Claim 1 defines the rule program (66) as being executable by the network connection device (12). Regardless of the above argument regarding applicant's disagreement with the asserted equivalence of the network connection device (12) and the flow classification and routing block 218, applicant submits that there is no description in Hawkinson of the resource manager 222 being "executable" by the flow classification and routing block 218.

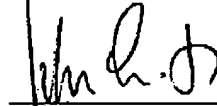
The examiner further asserts Hawkinson discloses the resource manager 222 comprises a set of operations (OA, point 5, lines 11-12). The examiner cites Col. 7, lines 8 - 67 of Hawkinson in support of that assertion and appears to specifically be referring to a numbered list in Col 7, lines 23-44. Applicant observes that the text introducing the numbered list state "in the case of ATM, an example of a resource request to the resource manager 222 may include the following:" (Hawkinson, Col. 7, lines 20-21, emphasis added). Applicant submits that the cited list pertains to possible parameters contained in the contents of a request to the resource manager 222 and not to a set of operations comprising the resource manager itself as asserted by the examiner. Regarding the equivalence of the set of operations and the list of parameters, applicant does not follow the examiner's reasoning. The word "operation" is commonly understood to be defined as an action, a series of acts, or a process. Applicant does not follow how the parameters cited by the examiner (Virtual Circuit Connection, Peak Cell Rate, Sustained Cell Rate, Minimum Cell Rate, Maximum Cell Burst Size ...), or any other parameters of the numbered list, could be seen to be "operations" as that word is commonly understood.

Regarding claim 1's step of generating a rule program, the OA states: "generating a rule program [222 i.e. resource manager], executable by the network connection device [fig. 4] ..." (OA, point

5, lines 9 and 10). Regardless of the above argument regarding applicant's disagreement with the asserted equivalence of Hawkinson's resource manager 222 to claim 1's rule program (66), applicant submits that the examiner has not asserted, and Hawkinson does not describe, how the resource manager 222 would be "generated" using Hawkinson's policy definition table 334 and class definition table 336 as the examiner appears to be suggesting. Neither has the examiner asserted how the resource manager 222 is "executable" by the flow classification and routing block 218, which the examiner has asserted to be equivalent to claim 1's network connection device (12).

For the reasons discussed above, applicant submits that Hawkinson does not disclose a method to pre-compile configuration information for a network connection device as defined by independent claim 1 and therefore claim 1 is patentable over Hawkinson. It follows that dependent claims 2-15 are also patentable. Applicant further submits that the arguments above apply equally to independent claim 30 and new independent claims 31 and 42 and that therefore claims 30, 31, and 42 are patentable over Hawkinson. It follows that dependent claims 32-41 are also patentable.

Respectfully submitted,



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